Variasi alkohol lemak dalam sedimen permukaan di Sungai Sepang Besar, Sepang, Selangor.

ABSTRACT

Composition of fatty alcohols from 19 surface sediment samples collected along Sungai Sepang Besar, Sepang, Selangor were determined. The sediments were extracted and analysed using the Gas Chromatography-Mass Spectrometry (GC-MS) technique. A total of 19 fatty alcohols from C12 to C30 including 4 branched compounds were identified with concentrations in the range 0.02 μg/g – 9.01 μg/g dry weight. C26 fatty alcohols dominated most sampling stations with concentrations ranging from 0.29 to 5.43 μg/g dry weight and constitued 15.5% of total fatty alcohols. According to individual compounds of fatty alcohols and the [Σ(C12- C20)/Σ(C22- C30)] ratio, Sungai Sepang Besar has a high composition of short-chain fatty alcohols (C12- C20) which mainly originate from marine organisms. However, the Alcohol Sources Index (ASI) showed that terrestrial derived fatty alcohols dominated the area due to high concentration of C26 compounds in most sampling stations. The value of (odd chain length)/(even chain length) ratios were high for almost all the sampling stations due to high bacterial activities. It can be concluded that the surface sediments of Sungai Sepang Besar contained organic materials from marine, terrestrial and bacterial sources.

Keyword: Alkohol lemak; Bahan organik; Sungai sepang; Sedimen.